Testimony of
K. James Yager

CEO
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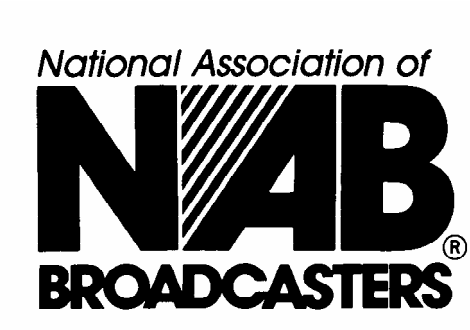
On behalf of the



Hearing on the Staff Draft of the
DTV Transition Act of 2005

U.S. House of Representatives
Subcommittee on Telecommunications and the Internet
May 26, 2005

Thank you, Mr. Chairman, for the opportunity to appear today before the Subcommittee to discuss the staff draft of a bill aimed at advancing the digital television transition, while helping consumers to continue to use their analog televisions. My name is K. James Yager. I am CEO of Barrington Broadcasting Company. I appear before you today on behalf of the National Association of Broadcasters,

First of all, I must say that I could not agree more with the purpose of the bill. Advancing the DTV transition while preserving television reception for consumers, particularly those reliant on free-over-the-air television for news, entertainment, local information and critical emergency warnings, has long been the goal of Congress, and of us all. Crafting a plan that also helps consumers to continue to use their analog televisions until they are ready to join the full digital television experience by purchasing a digital set will respond to consumer needs and expectations in a forward thinking way. I support your efforts in this regard.

It is, after all, the consumer for whom the DTV transition was launched. The American consumer, long the beneficiary of the finest television service in the world – in fact the "envy of the world," must continue to receive the best television today's technology can provide. The American consumer deserves the best technical picture quality achievable, the greatest array of programming and information choices, the most varied supplemental services and the surest emergency warning capability. The DTV transition, long underway, will provide this to America's populace – and for free. Consumers deserve and will demand nothing less.

Consumers deserve and will demand as well that their television reception not be interrupted in the midst of this transition to the amazing world of digital television.

Which is why a DTV transition bill must contain provisions for continued use of both analog and digital receivers by the vast majority of consumers while *they* make the transition and buy new sets. Thus, the staff draft wisely includes provisions for cable subscribers, the largest segment of the viewing audience, to continue to use their analog sets after analog broadcasting ceases but at the same time have ready access to the *digital* version available to their cable-subscribing neighbors who have purchased HDTV receivers.

We are confident that, as the Subcommittee works on the draft bill, it will also work to help free over-the-air consumers continue to watch their analog televisions while they taste true digital television and make their plans to join the digital television revolution. In this regard, it is essential that Congress have a plan to ensure that all households can get television reception. This plan is necessary to meet consumers expectations and prevent widespread outcry. Consumers expect their televisions to work, and they will continue to expect – and demand – this, until they are given advance and clear information to the contrary. The staff draft already includes provisions to give advance warning to the public. Without sufficient warnings, the public will rebel and will blame all in sight for newly or recently purchased sets going dark. If, on the other hand, consumers are given lead time, adequate explanation and clear consumer information about new digitally-capable sets as well as help equipping OTA-only households, they will embrace the digital television future with enthusiasm and excitement rather than with dismay and outrage.

Broadcasters are ready to serve the public with brand new digital facilities and beefed up digital signals, high definition and high quality digital versions of their favorite

shows, specials and sporting events including current and coming plans for multicasts like Final Four basketball and zoned newscasts. We are designing new news sets, purchasing digital cameras and seeking to exploit digital capabilities at every turn. Cable too has readied their digital plants, expanded capacity far beyond expectations and planned for advanced digital services. Set manufacturers have deployed increasingly cost-effective digital sets and sets at various size and price points with glorious high definition picture capability. They are adding digital tuning capability to analog sets, extending those "second tier" sets' lives beyond the analog turn off and providing popular "cable ready" versions of digital sets.

The FCC has adopted measures designed to advance consumer take-up of digital sets, such as mandatory broadcaster build-out deadlines, jaw-boned voluntary measures for broadcasters, programmers, cable and manufacturers, encouraged and approved cable/DTV inter-operability specifications (including tuners in "cable ready" sets) and the all-important tuner mandate. (That measure alone, once it is fully in place, will speed consumer penetration of digital reception capability in the course of normal replacement of televisions and do it in short order.)

Now, this Subcommittee has taken the reins and is moving boldly to advance the digital television transition, encouraging consumers to cross the digital finish line while preserving use of the majority of analog sets for a reasonable period and setting a deadline and measures that will provide consumers with warning, information and education. NAB applauds your efforts to grapple with critical consumer issues, speed up the digital television transition and recover spectrum for national security and public safety use.

We believe and hope that the Subcommittee, as it continues to work on the staff draft will keep consumers at the forefront and meet all the goals set out for the digital transition by Congress in 1997.

Congress sought to achieve three overarching goals in the DTV transition:

(1) Bring the benefits of digital technology with its potential for more programming options and advanced services to *consumers*;

(2) Avoid the loss of free television to large numbers of consumers stranded with analog-only receivers; and

(3) Reclaim channels 52-69 to be reallocated for other purposes.[1]

The staff draft now before you would achieve Congress' goal of reclaiming spectrum for re-use. It would help advance the digital transition, and hence help advance goal number one, by providing for cable carriage of *digital* broadcast signals, as broadcast and without material degradation, to entice the largest segment of the public to buy digital sets and by requiring advance warning and consumer education and information, which should incent consumers to buy digital sets. And it would begin to address goal number two by advancing the all-important Tuner mandate so that *all* televisions 13" and larger sold after July 2006 will receive digital signals and thus many OTA-only consumers will sooner have free, digital reception by normal replacement of television receivers and not be stranded by the analog cut-off.

As it is worked on by the Subcommittee the staff draft bill can and should make clear that cable carriage of broadcasters' digital "primary video" service includes the free multicast programming services that would advance Congress' goal number one of

[1] 47 U.S.C. § 309(j)(14)(B).

bringing the benefits of digital technology *with its potential for more programming options and advanced services to consumers*.

And of course yet to be added to the staff draft is the missing critical piece necessary for the accomplishment of Congress' goal number two, namely enabling OTA consumers (over 20 million households) to continue to watch their analog televisions after the analog cut-off until they have purchased DTV sets. This critical piece of the puzzle that Congress has already identified (avoiding stranding OTA viewers) will necessarily involve a plan to make digital-to-analog converters accessible to OTA households without digital reception capability. As I have testified previously, many of those OTA viewers are not in a position to purchase new equipment – even a converter box. We must not disenfranchise those citizens.

We do believe that the wise step of moving up the tuner mandate suggested in the draft will naturally equip many OTA households with digital reception. Other OTA consumers will have taken the plunge on their own and bought a HDTV or digital receiver, particularly after the consumer education and warnings the bill will require. But for a majority of OTA households, Congress must devise a solution to avoid loss of television service and its emergency warnings to millions of OTA households. This, the OTA viewing public will demand, and deserve. We expect the Subcommittee will be able to fashion a converter plan that will meet the basic needs and expectations of consumers, including those less well off financially, in the 20 million OTA-only households that they will continue to receive television service without subscribing to a pay television service.

NAB believes that the draft bill can provide a useful framework for advancing the digital television transition, avoiding stranding OTA households, reclaiming spectrum for re-use *and* meet consumers' expectations that their existing televisions will continue working for a reasonable time.

Before turning to each of the provisions of the draft bill in turn for more specific comment, I would like to describe for the Subcommittee the progress broadcasters have made in the DTV transition to date. After addressing the draft bill's specifics, I will lay out for the Subcommittee the challenge it faces as it seeks to grapple with the OTA households/digital-to-analog converter issues, as well as some comments about the converters consumers need.

Broadcasters Are Ready For the End Game of the Transition

Even without the final pieces of the puzzle in place, evidence of the remarkable progress made so far can be found everywhere, due in no small measure to broadcasters' commitment and actions. Our industry has spent enormous sums of money and undertaken extraordinary steps to implement the transition, and I am pleased to report that these efforts are paying off. Broadcasters have built – and are on air with – DTV facilities in 211 markets that include 99.69% of all U.S. TV households.[2] At this point in the transition, over four-fifths – 84.2% - of U.S. television households have access to at least six free, over-the-air digital television signals, per NAB database figures. According to the FCC, nationwide, at least 1497 television stations in 211 markets are delivering free, over-the-air digital signals today.[3] Currently, more than 92 million

[2] National Association of Broadcasters, *DTV Stations in Operation,* http://www.nab.org/Newsroom/issues/digitaltv/DTVStations.asp (as of May 25, 2005).

[3] *See* www.fcc.gov/mb/video/dtvstatus.html ("Commission statistics").

households receive six or more DTV signals; 71 million households receive nine or more DTV signals; and a full 30 million households receive 12 or more DTV signals, per NAB database figures. More and more digital stations are overcoming their unique obstacles and going on air almost daily. The digital transition is working and moving ahead quickly, and any claims to the contrary are simply untrue.

In the top ten markets, covering 30% of U.S. households, all top four network affiliates are on-air with digital signals,[4] and in markets 11-30 (24% of U.S. households), all 79 top four affiliated stations are on-air. Thus, all ABC, CBS, Fox, and NBC affiliates in the top 30 markets, representing 53.5% of all U.S. households, are on air with DTV. Even smaller stations in these markets and stations in smaller markets are making terrific progress, with at least 1378 out of a total 1603 stations currently on air in digital,[5/] despite the far fewer resources of these stations. In fact, many firms have been forced to mortgage their stations to afford the equipment needed to implement the transition, and without any immediate prospect of revenues to offset these huge investments.

On the programming side, both networks and local stations are providing an extraordinary amount of high-quality DTV and HDTV programming, as well as a growing number of valuable multicast channels, to entice viewers to join the digital television transition and purchase DTV sets. For example, the four top networks currently offer virtually all their prime time programming in HDTV, along with high-profile specials and sporting events like the Academy Awards and the Grammy's, the Masters, and playoff games in all the major professional sports leagues. The WB

[4] This includes 38 with licensed full-power digital facilities and two New York City stations with Special Temporary Authority ("STA") currently covering a significant chunk of their service areas and with plans to expand even more.

[5/] *See* Commission statistics.

network also is offering ten or more prime time programs in HD. And this continues to grow.

Local stations are also doing more all the time to supplement the network HDTV and multicast fare, despite the enormous cost for full local HD production facilities. Examples of local HDTV programming abound. Stations that have begun to produce and broadcast their daily local newscasts in HD include WRAL-TV (Raleigh, NC), KOMO-TV (Seattle, WA), KUSA-TV (Denver, CO), WUSA-TV (Washington, D.C.), and WJW-TV (Cleveland, OH). HD broadcasts of local special events are numerous, like KTLA's (Los Angeles, CA) broadcast of the Rose Parade in a commercial-free HD broadcast that was simulcast in Spanish and closed captioned and distributed on many Tribune and other stations. Raycon Media this summer will roll-out a new 24-hour TV music video channel on 30 of its stations, which includes coverage of local music artists and local concerts. NBC Universal has signed up enough affiliates for its Weather Plus digital channel to reach 60% of the U.S. Gray Television and UPN are partnering to expand DTV program options.

All of these developments demonstrate that broadcasters are more anxious than anyone to get the transition over and done with. Broadcasters have no interest in shouldering the enormous costs of operating dual facilities any longer than absolutely necessary to avoid disruption to consumers. Building a second transmitter, and then maintaining and powering two transmitters for any period of time is extremely expensive, especially since there will be no opportunity to recover much of these costs. Similarly, any need to repair or replace analog equipment now is little more than wasted resources. Indeed, by the time the transition is over, broadcasters will spend between $10 and $16

billion to fully convert to digital, and we simply cannot afford to strand this investment, or accept any further delays in our ability to provide new digital services to recoup at least some of this investment.

STAFF DRAFT – SECTION BY SECTION DISCUSSION

Sec. 3 Analog Spectrum Recovery: Hard Deadline

The 85 percent DTV penetration test contained in Congress' 1997 Balanced Budget Act, which would be replaced with a hard deadline in the draft bill, was devised to protect the vast majority of consumers from an early end to the DTV transition and the need to replace hundreds of millions of televisions overnight. It would allow consumers to trade-out their analog sets and upgrade to digital sets over time, and in the normal course of replacing televisions. With the hard deadline in the staff draft, consumers will face the prospect of replacing at least their main television sooner than they may have expected.

We believe, however, that other provisions of the draft bill, namely advancing the Tuner mandate and permitting cable downconversion of digital broadcast signals to analog for cable subscribers (who would still receive digital broadcast signals as broadcast), ameliorate much of this concern. We expect that there will be further discussion within the Subcommittee as to whether the specific date in the staff draft is the optimal hard cut-off deadline. And, of course, the major unresolved issue is provision in the bill for OTA households to continue to receive television service after the analog cut-off.

One of Congress' objectives when it authorized the transition to digital beginning in 1996 was to strengthen the over-the-air broadcasting system. A premature end to

analog broadcasting before consumers are ready may have the opposite effect of reducing the audience of local stations and thus reducing their ability to provide attractive programming and local public service. If consumers are driven to cable and satellite programming, that would increase those monopoly providers' power and frustrate Congress' goal of improving local broadcasting. This then, continued preservation of free local broadcasting, is another reason that the Subcommittee should make provision for converters for OTA-only households without digital reception capability, including some solution for the less well-off.

The provision of Sec. 3 of the staff draft that directs the FCC to make final DTV channel assignments within the core by December 2006 and conclude any reconsideration of these assignments by July 31, 2007 appears reasonable, given the FCC's current DTV channel assignment plan, and necessary to stations' ability to construct and move to new digital facilities before the analog cut-off. There may however be appeals of final channel assignments that would complicate completing final construction for some stations and consumers. This is all the more reason for the Commission to continue its diligent work to accommodate the channel changes needed by many stations.

We are pleased to see in Sec. 3 of the draft bill six month "status reports" by the Commission on progress in completing Canadian and Mexican coordination of outstanding DTV channel assignments. This coordination, of course, is necessary for all stations to complete DTV facilities construction and be on-air before analog broadcasting is to cease.

NAB notes that, once the channel repacking plan is complete, the FCC must turn to the issue of channels within the core and licenses for digital translators. These "repeaters" of full power stations provide critical television service to thousands in rural and mountainous areas, which must be preserved in the digital switch-over. We urge the Subcommittee to consult with the FCC as to the most efficient way to protect translator service in light of this newly developing DTV transition plan.

Sec. 5. Consumer Education Regarding Analog Televisions

NAB agrees that consumer education about the coming end of analog broadcasting and the need for converters and warnings on analog sets and in-store displays alerting consumers to the limited useful life of these sets is important for consumers and important to the transition. Promotion and education for consumers about DTV can encourage consumers to purchase DTVs, thereby reducing the number of households needing converters to continue receiving television service. NAB in fact urged provision of these measures in our February 2005 testimony to this Subcommittee. We agree that the Commission should undertake a substantial public outreach program for consumers, and that the various industry parties should participate in alerting consumers to the end of analog broadcasting.

NAB supports the provision in Sec. 5 directing the FCC to preserve and expedite the all-important Tuner mandate schedule. This provision, once fully effectuated, will, on its own, result in sizeable numbers of households becoming digital capable, by dint of consumer replacement of analog televisions in the normal course. Extrapolating from the conclusions of an A.D. Little, Inc. report prepared for NAB and MSTV and submitted to the FCC on the cost of adding DTV reception capability to television sets and timeline

scenarios for achieving 85% digital penetration,[6] we estimate that the tuner mandate alone could result in reaching 85% digital penetration by 2009. This powerful provision can reduce the number of digitally-incapable households and thus the number of households needing converters.

NAB supports expediting the turner schedule as the staff draft does, but we suggest that a provision be added to similarly advance the "cable ready" tuner schedule, which mirrors the tuner mandate.

Sec. 6 Digital-to-Analog Conversion and Tiering

The draft bill provision permitting cable operators to downconvert digital broadcast signals to analog at the headend (or in subscribers' homes) for delivery to cable households with analog sets, coupled as it is with mandatory provision of the primary video of the digital signal to subscribers' homes, seeks to achieve the purposes of advancing the (true) DTV transition for cable consumers (enticing them to buy DTV sets), not obsoleting the tens of millions of analog sets connected to cable systems and providing digital broadcast service to cable subscribers with DTV sets. This provision addresses the fundamental flaw of the DTV transition plan previously discussed by the former Chief of the FCC's Media Bureau. The Media Bureau plan allowed only for downconversion and thus would have thwarted the many benefits that undegraded digital service would deliver to cable consumers. We urge the Subcommittee to carefully consider the language of the staff draft to ensure that it achieves the objective of ensuring carriage for all stations.

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[6] "Assessment of the Impact of DTV on the Cost of Consumer Television Receivers," Final Report to MSTV and NAB, Arthur D. Little, Inc., September 10, 2001.

This provision should also make clear that carriage of the digital "primary video" includes all free broadcast programming, as the Cable Act must carry provision intended.[7] Cable carriage of all multicast digital programming will accomplish for the 65% plus of consumers who are cable subscribers the goal number one of Congress for the DTV transition: bringing the benefits of digital technology with its potential for more programming options and advanced service to consumers. The opportunity for new universal free services was one of the key reasons that Congress authorized the DTV transition, and it is simple economics that the consumer appeal of the HDTV/multicast mix will help drive purchase of digital sets, to the benefit of the consumer. This tremendous consumer benefit, redounding as it will to the benefit and strengthening of the free over-the-air television service as the Cable Act intended, would come at scant cost to cable systems, with their vast complement of cable channel capacity.

Cable operators can no longer claim channel-locked capacity. The enormous growth in cable carrying capacity has been revealed by data submitted by the cable operators themselves, in response to a formal survey request by the Commission. NAB/MSTV/ALTV retained the Merrill Weiss Group to summarize and analyze this data.[8] Some specific conclusions of the Weiss Report are:

- Overall bandwidth delivered to the average subscriber increases from 622 MHz to **752.2 MHz** over the period from yearend 1999 to **yearend 2003**.

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[7] *See* NAB/MSTV/ALTV Petition for Reconsideration and Clarification, FCC CS Docket No. 98-120, filed April 25, 2001; Petition for Reconsideration of the National Association of Broadcasters and the Association for Maximum Service Television, Inc., FCC CS Docket No. 98-120, filed April 21, 2005.

[8] Merrill Weiss Group, *Analysis of Cable Operator Responses to FCC Survey of Cable MSOs*, Attachment A to the Reply Comments of NAB/MSTV/ALTV, CS Docket No. 98-120 (filed Aug. 16, 2001)("Weiss Study").

- Subscribers receiving **750 MHz or greater total bandwidth** service increase from 56.1 to **86 percent** over the period of the survey.
- Calculations show a capacity **range of 261.8 to 295.7 total program services to the average subscriber** at yearend 2003, with capacity continuing to increase as cable completes upgrades currently underway.
- Calculations show a capacity range of **298.7 to 399.9 total program services to** the **86 percent of subscribers** receiving 750 MHz or more total bandwidth service at yearend 2003.

Cable parties agree the problem is that innovative and diverse program offerings as well as new advanced non-video services would be squeezed out by DTV must carry. But as seen in the Weiss Report, in 2003 the *average* cable subscriber will have delivered to it 725.2 MHz of bandwidth, with somewhere between 261.8 to 295.7 total program services, *in addition to a full allocation of channels for non-video services*.

The Weiss Report also includes a chart utilizing the new cable data that shows that the relative burden of carrying both DTV *and* NTSC signals will be *less* than the initial must carry burden (13.42 percent for analog commercial stations in 1993 and 8.43 percent for both DTV and NTSC at yearend 2003).[9] In addition to the explosion in cable capacity, this is also due to the fact that two digital broadcast television signals can be carried on one six MHz channel.[10] In short, cable cannot properly argue that capacity constraints preclude temporary inclusion of all broadcast signals.

The provision in this section of the draft bill that authorizes the FCC to sunset this "carry-one-carry-all" requirement after five years, depending on penetration of digital capability further limits the miniscule burden on cable operators. Moreover, this sunset feature of the provision limits the small burden on cable to achievement of the benefits of downconversion to consumers, to the transition and to the free local television service.

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[9] Weiss Study at 15.

[10] *Id*. at 12.

This provision gives cable consumers the opportunity to trade out their analog sets and upgrade to DTV in a more normal course and thus avoids consumer frustration and outcry.

The Need for a Converter Solution for OTA Households

NAB has recognized that, while the DTV transition was designed to afford consumers the opportunity to trade out their analog receivers for digital sets on their own timetable, the transition must come to a conclusion at some reasonable point. Nonetheless, we remain convinced that any transition plan must protect OTA consumers from the loss of television service and preserves local broadcast service for all cable subscribers. We also believe that consumers will demand a cost-effective solution for analog OTA sets in all homes. We thus believe that the staff draft should include an accommodation for OTA only households and present a solution for analog OTA sets in general. The numbers of sets and consumers at issue here speak for themselves and for the expected public reaction if some real solutions are not included in the Subcommittee DTV plan.

At the time of the conversion to all digital, consumers in 20.5 million households that rely solely on over-the-air ("OTA") broadcast television will lose all television service if they have not procured digital television-capable receivers or converters. This situation has the sure signs of significant disruption, and the Subcommittee is wise to begin to plan for that time, in order to minimize disruption.

NAB believes that protecting consumer's access to their favorite television programming and channels, as well as to news, information and emergency alerts, will be critical to a successful conclusion to our digital television transition. We must not forget

that there are millions of unwired television sets in cable and satellite homes as well. Approximately 18.3 million MVPD households have one or more television sets that rely solely on over-the-air television reception. There are today approximately 280.5 million analog sets in use.[11] Consumers may not readily dispose of these sets, even if they have purchased a new digital television receiver.

Congress must take the steps necessary to protect OTA sets from obsolescence. Clearly, the free, universal OTA broadcast service must be preserved and the 20.5 million households that rely on it must be protected against loss of television service.

Many OTA households will likely have purchased DTV-capable receivers by the time analog broadcasting ends. But for the remaining OTA households (and for analog sets in all households), there must be a solution, or rather, a series of solutions. One measure already included in the draft bill is promotion and education about DTV, to encourage consumers to purchase DTVs. A near term measure, also included in the draft bill, is to require warning labels on analog-only sets, alerting consumers to the limited useful life of these sets.

The needed key to avoiding disenfranchising large numbers of consumers and to mitigating the disruption for consumers with analog sets, will be making digital-to-analog converters widely available at a reasonable price. Without the widespread availability of low cost digital-to-analog down-converters, Congress risks disenfranchising millions of

[11] NAB appends hereto, as Attachment A, a series of charts constructed for the FCC's proceeding inquiring about options for minimizing the disruption to consumers when the switch-over to digital broadcasting occurs. *See Public Notice,* MB Docket No. 04-210, DA 04-1497, May 27, 2004. In that proceeding, the FCC asked for quantitative data on viewers and receivers. *See also* Comments and Reply Comments of the National Association of Broadcasters and the Association for Maximum Service Television, Inc. in that docket. The estimates used in this testimony are from Attachment A.

viewers and rendering useless the analog sets they rely on and, in many cases, just recently bought. Not only is the OTA analog set population enormous (73 million) and the number of OTA-only homes huge (20.3 million households), as I have previously testified, the importance of OTA service cannot be overstated in terms of the OTA viewing public's reliance on the free, over-the-air service for news and information and emergency alerts.

To evaluate the stake the public has in this transition (and to assess the damage that various proposals affecting the digital transition may inflict on the public), Congress must take into account three components of the public interest served by over-the-air television. The first component is the 18.9 percent of viewers that rely solely on over-the-air service, whether because they cannot afford to subscribe to cable or DBS, because cable or DBS service is not available to them or does not provide local broadcast signals, or because they believe in the universal availability of free, over-the-air broadcast service. The second component is the owners of the 28 million of television sets in MVPD homes that are OTA-only analog sets. The third component consists of all viewers, because all viewers rely on over-the-air service in times of weather, terrorist or other emergencies when cable or satellite service may not be available and because broadcast television service provides an effective competitive check on cable and DBS services in terms of price, service, and diversity.

Many of the 18.9 percent of U.S. households that receive television service solely over the air do so by choice, not because economics dictates it. For example, a survey conducted by the Consumer Electronics Association found that "[l]ess than 30 percent [of households that have chosen not to subscribe to cable or DBS] indicate that insufficient

funds play a role in their decision not to subscribe."[12] Many Spanish-speaking viewers choose not to subscribe to cable or DBS because these services offer primarily English-language programming.[13]

But there are also a large number of viewers who cannot afford pay television. Twelve percent of American households fall below the poverty line.[14] They should not be forced by government policy into paying subscriber fees that only escalate over time and that they can't afford. They deserve as an option -- the preferred and responsible option -- a vibrant, over-the-air service that provides the benefits of new digital technologies.

Over-the-air viewers have important, well thought out and legitimate reasons for relying on over-the-air reception, e.g., they believe in the value of free, over-the-air television; they do not want to be locked into the ever-increasing costs of pay television service; they view primarily alternative-language programming; they have additional sets that are not hooked up to cable or satellite, among others. They feel well-served by the locally-oriented and public interest programming they receive over the air and do not see the need nor do they want to be pushed to ever more expensive pay television services. Because broadcast television is universally available and is the only service used by millions of Americans, Congress should ensure that these viewers are not shut out or

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[12] Comments of the Consumer Electronics Association, FCC MB Docket No. 04-210, August 11, 2004 ("CEA") at 4.

[13] Comments of Entravision Holdings, LLC, FCC MB Docket No. 04-210, August 11, 2004, at 2.

[14] *See Census Bureau says 1.3 million more slipped into poverty last year; health care coverage also drops*, CNN Money (Aug. 26, 2004), available at http://money.cnn.com/2004/08/26/news/economy/poverty_survey.

marginalized, but continue to have the option to rely on over-the-air reception and still receive meaningful local broadcast service.

To preserve this access and mitigate the disruption for consumers with analog sets, digital-to-analog converters must be widely available at a reasonable price. In this regard, it is important to keep in mind not only the cost of such converters, but the capabilities of those converters. At a minimum, digital converters should be capable of receiving all digital broadcast formats, both HD and SD, on any VHF or UHF broadcast channel, and provide connection to an existing analog TV receiver via a channel 3 (or 4) RF interface. Thus, in conjunction with any analog receiver, the digital converter box should be able to receive, render and display usable pictures and sound from high definition as well as standard definition broadcasts, but would not be required to render pictures and sound at more than standard definition quality.

In order not to disenfranchise current OTA-only television viewers, digital converter boxes should be designed so as to maximize the likelihood that they will work with digital broadcast signals in the same receiving configuration (same antenna, location, etc.) as used for current analog NTSC reception. Thus, the digital converters should be able to receive and display signals under the most challenging receiving conditions, including low signal level, severe multipath and adjacent channel interference conditions. While marginal NTSC pictures are often comprehensible and accepted by TV viewers, the digital "cliff effect" cleanly separates digital TV viewers into those with watchable pictures and those without pictures at all. Thus, because viewers with poor digital reception would be essentially eliminated as television viewers, allowing less than

excellent RF receiver performance in digital converters may sacrifice much of the broadcast-only viewing audience when analog transmissions cease.

Current DTV converters are available from about $200 and up, although none are presently available with SD-only outputs. Like all other electronic components, the manufacturing cost of a digital converter box is closely related to the manufacturing volume. NAB and MSTV previously studied the cost of adding DTV capability to television receivers as well as the likely cost of set top boxes.[15] The Arthur D. Little study noted that by the year 2006 digital converter boxes could be expected to sell at retail for under $200, with a manufacturing cost near $100, composed mostly of the fixed recurring costs of manufacturing (a physical box with a TV tuner, power supply, cabinet, remote control, switches, knobs, jacks, etc.) and only slightly impacted by the cost of the integrated circuits required to receive and process digital broadcasts.

Motorola's 2004 testimony before this Subcommittee[16] that a digital converter box with a retail price of $67 is possible in 2007 would indicate that further price reductions from large volume production are possible. Similarly, LG Electronics indicated in FCC filings last summer that the retail price of a simple digital-to-analog converter box could be under $100 by late 2005, assuming production volumes in the millions of units and that they believe that digital-analog TV converter prices may be as low as $50 by 2008, assuming industry-wide demand of tens of millions of units by then.[17]

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[15] "Assessment of the Impact of DTV on the Cost of Consumer Television Receivers," Final Report to MSTV and NAB, Arthur D. Little, Inc., September 10, 2001.

[16] "Motorola Broadband CTO to Speak Before House Subcommittee on Telecommunications Regarding DTV Transition," Motorola press release, July 21, 2004.

[17] Comments of LG Electronics filed in FCC MB Docket, 04-210, August 11, 2004 at 3.

Conclusion

NAB stands ready to work with the Subcommittee as it continues to refine the draft bill on the DTV transition that is the subject of this hearing. We believe that the DTV transition is progressing and the full effect of the tuner mandate coupled with the growing awareness of DTV's amazing improvement to television viewing will move the transition across the finish line in the next few years. But we appreciate the Subcommittee's desire to bring a certain end to the transition and its efforts to date to accomplish that goal. Our abiding belief in the necessity to preserve television service for OTA households without digital capability and the wisdom of devising a cost-effective solution for all OTA analog sets leads us to urge the Subcommittee to focus on this critical remaining piece for its plan to conclude the DTV transition.